UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,393	11/04/2003	Ramesh M. Santhanakrishnan	112025-0531	5792

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EXAMINER
JONES, PRENELL P

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/700,393	SANTHANAKRISHNAN ET AL.
	Examiner	Art Unit
	Prenell P. Jones	2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-8,10-12,16-18-20 and 23* is/are rejected.

7)☒ Claim(s) *2-4,9,13-15,21 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1, 6, 7, 12, 17, 18, 20 and 23 are rejected under 35 U.S.C. 102(b) as

being anticipated by Hoffman et al.

Regarding claims 1, 6, 7, 12, 17, 18, 20 and 23, Hoffman discloses (Figs. 2-4 and 6, col.

5, line 6-51, col. 9, line 28 thru col. 10, line 21, col. 11, line 18-67) an apparatus that

handles (controls/manages) congestion (flooding) associated with a CPU, VLAN,

switching element (intermediary point between CPU and forwarding database),

forwarding logic and forwarding memory (forwarding database memory/CAM), wherein

packet data entries are stored, forwarding logic that screens packets to determine

whether the packet is encapsulated by SNAP or packet is tagged by a VLAN, utilization

of threshold logic, threshold registers (determining limit), destination search matches a

known VLAN or unknown VLAN entry, (col. 16, line 15-42) suggested VLAN utilization,

(col. 19, line 55 thru col. 20, line 67, col. 21, line 66 thru col. 22, line 67) a first and

second programmable priority threshold value is determined (establishing limit), (col. 22,

line 51-67) congestion logic (flood control) randomly discard packets attempting to enter

queue (database) after the queue's programmable threshold register associated with

each queue is met or exceeded, (col. 7, line 21-23) eliminate amount of flooding needed

(disabling flooding).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 5 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hoffman et al and Bare.

Regarding claims 5 and 16, as indicated above, Hoffman discloses (Figs. 2-4 and 6, col.

5, line 6-51, col. 9, line 28 thru col. 10, line 21, col. 11, line 18-67) an apparatus that

handles (controls/manages) congestion (flooding) associated with a CPU, VLAN,

switching element (intermediary point between CPU and forwarding database),

forwarding logic and forwarding memory (forwarding database memory/CAM), wherein

packet data entries are stored, forwarding logic that screens packets to determine

whether the packet is encapsulated by SNAP or packet is tagged by a VLAN, utilization

of threshold logic, threshold registers (determining limit), destination search matches a

known VLAN or unknown VLAN entry, (col. 16, line 15-42) suggested VLAN utilization,

(col. 19, line 55 thru col. 20, line 67, col. 21, line 66 thru col. 22, line 67) a first and

second programmable priority threshold value is determined (establishing limit), (col. 22,

line 51-67) congestion logic (flood control) randomly discard packets attempting to enter

queue (database) after the queue's programmable threshold register associated with

each queue is met or exceeded, (col. 7, line 21-23) eliminate amount of flooding needed

(disabling flooding). However, Hoffman fails to teach or suggest logging a message that

is accessible to intermediate point. In analogous art, (Abstract, col. 8, line 40-55, col.

20, line 3-14) Bare discloses MAC address learning, offloading and flooding of packets

associated in a VLAN environment, wherein the function of forwarding packet data to

memory is implemented, and when ports are blocked (flooded) a message is logged

and accessible to system manager and any network management station. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

implement logging a message associated with a communication system that

implements forwarding databases (memory/queue) and associated entries as taught by

Bare with the teachings of Hoffman's communication system which also implements

forwarding databases in a VLAN environment for the purpose of further managing the

balancing of packet data in a network where flooding is an issue.

5.   Claims 8, 10, 11 and 19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Hoffman et al in view of Gleeson.

Regarding claims 8,10, 11 and 19, as indicated above, Hoffman discloses (Figs. 2-4

and 6, col. 5, line 6-51, col. 9, line 28 thru col. 10, line 21, col. 11, line 18-67) an

apparatus that handles (controls/manages) congestion (flooding) associated with a

CPU, VLAN and switching element implementing forwarding database. However,

Hoffman fails to teach or suggest disabling learning for VLAN. In analogous art,

Gleeson discloses (Abstract, Fig. 3, col. 3, line 18 thru col. 6, line 64) a packet data

communication system that includes a network switch associated with VLAN

characteristics, whereby the switch implements forwarding databases, the processing of

packets as associated with is managed as well as packing flooding at registered ports,

wherein the MAC perform operations on packets entering and leaving switching system,

wherein operations performed including forwarding database entries and "learning", the

disabling of the learning function keeps the MAC address from being learned and

discontinue the adding of entering data to the database. Gleeson further discloses (col.

4, line 34 thru col. 5, line 53, col. 6, line 23 thru col. 7, line 47) determining whether to

disable the learning with respect to the comparing entries in the database associated

with the MAC address and that matches source address and destination address, and if

comparisons do not match, entries of source address and destination address are

entered into the database after the learning process is performed. Therefore it would

have been obvious to one of ordinary skill in the art at the time of the invention to be

motivated to implement disabling the "learning" as taught by Gleeson with the teachings

of Hoffman for the purpose of further managing flooding associated in a VLAN packet

data communication system.

Allowable Subject Matter

1.   Claims 2-4, 9, 13-15, 21 and 22 are objected to as being dependent upon a

rejected base claim, but would be allowable if rewritten in independent form including all

of the limitations of the base claim and any intervening claims.

2.   The following is a statement of reasons for the indication of allowable subject

matter: Although the prior art discloses an apparatus that handles (controls/manages)

congestion associated with a CPU, VLAN, switching element (intermediary point

between CPU and forwarding database), forwarding logic and forwarding memory

(forwarding database memory/CAM), wherein packet data entries are stored, forwarding

logic that screens packets to determine whether the packet is encapsulated by SNAP or

packet is tagged by a VLAN, utilization of threshold logic, threshold registers,

destination search matches a known VLAN or unknown VLAN entry, suggested VLAN

utilization, a first and second programmable priority threshold value is determined

congestion logic randomly discard packets attempting to enter queue after the queue's

programmable threshold register associated with each queue is met or exceeded,

eliminate amount of flooding needed, a packet data communication system whereby

flooding is managed in a VLAN environment with the help of learning process in

associated with the forwarding process along with forwarding databases entries,

flooding ports with packets initiates traffic pattern from ever learning destinations,

they fail to teach or suggest the database entries containing a MAC threshold along with

a MAC count that indicate the number of database entries associated with the VLAN, a packet associated with VLAN determining if VLAN is shut down.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the · Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

May 6, 2005

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